

Human Papilloma Virus (HPV) High Risk (HR) Genotyping

almost **all**
cases of cervical cancers

40%
of vaginal and vulvar cancers

90%
of genital warts



25-35%
of mouth and throat cancers

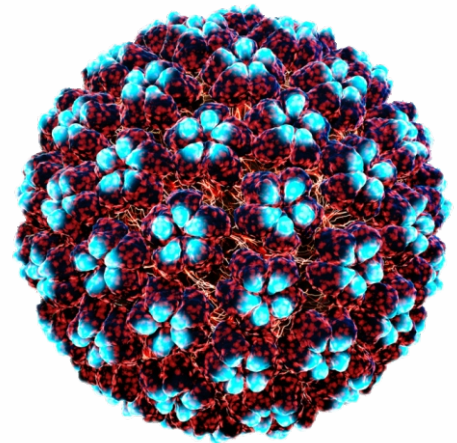
40-50%
of penile cancers

80-90%
of anal cancers *

Source: BC Pediatric Society and Canadian Cancer Society

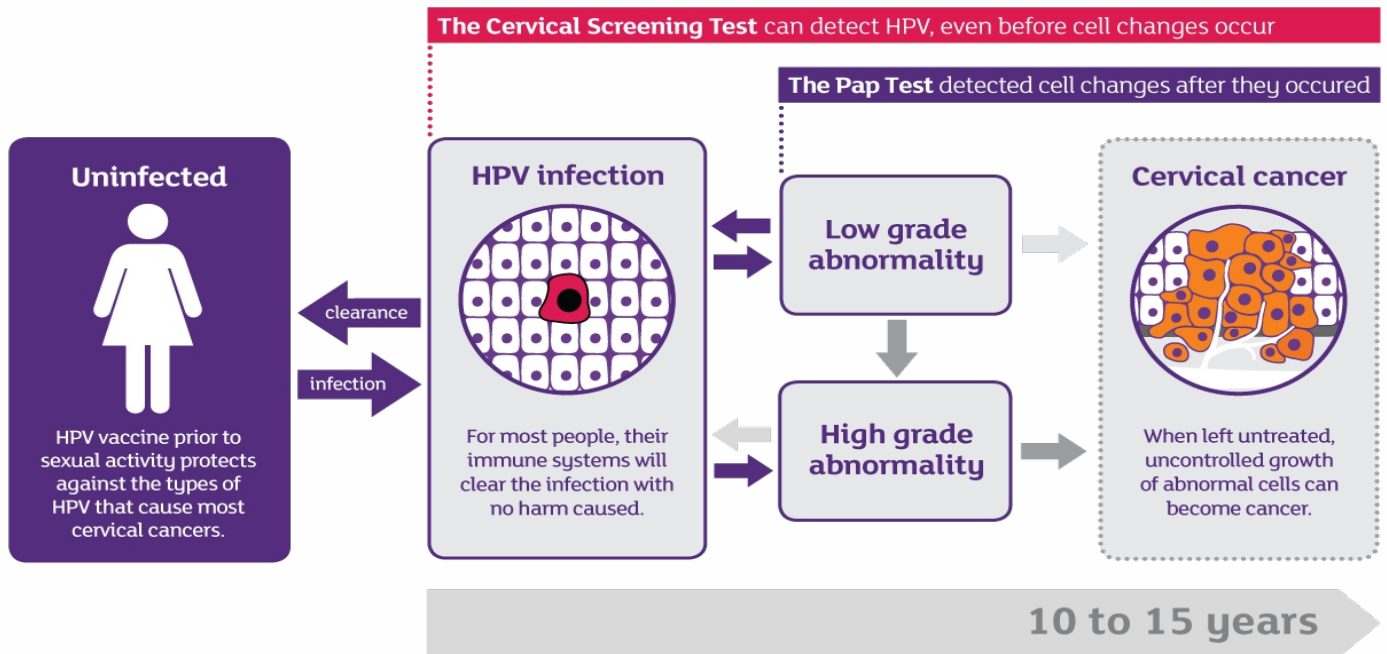
PURPOSE

HPV HR Genotyping is a qualitative in vitro test for the detection and differentiation of 14 high risk HPV types (16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, 68) in liquid based cytology and cervical swab specimens.



CLINICAL SIGNIFICANCE

HPV infection is linked with cervical cancer. HPV can be divided into “high-risk (HR)” and “low-risk (LR)” groups on the basis of their association with cervical lesions. Cervical cancer, which progresses from the precancerous stage to invasive cancer, has 7-20 years of precancerous stage; consequently early diagnosis is possible when HPV infection is suspected. High-risk HPV group may lead to the development of cervical cancer; especially, HPV16 and 18 are associated with 70% of cervical cancer cases.



PRINCIPLE AND METHOD USED

Method : Real-Time Polymerase Chain Reaction (Real-Time PCR).

Principle : Real-Time PCR is the most reliable method for sensitive and specific detection of target gene sequences present in the sample. DNA is extracted from samples, amplified using Real-Time amplification and detected using fluorescent reporter dye probes specific for targeted viruses. The assay includes a heterologous amplification system (Internal Control) to identify possible PCR inhibition and to confirm the integrity of the reagents used.



SAMPLE REQUIREMENTS

- Liquid based cytology and cervical swab specimens.
- Storage at 2-8°C upto 3 days.
- Transportation at 2-8°C

TURN-AROUND TIME (TAT)

Within 24 working hours

REFERENCES

Burd EM. Human papillomavirus and cervical cancer. *Clin Microbiol Rev.* (2003) 16(1): 1-17

Castle PE. The potential utility of HPV genotyping in screening and clinical management. *J Natl Compr Canc Netw.* (2008) 6(1): 83-95 Review